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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/063,180

03/28/2002

Robert D. Barnes

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EXAMINER

COBANOGLU, DILEK B

ART UNIT

PAPER NUMBER

3626

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/063,180	Applicant(s) BARNES ET AL.	
	Examiner DILEK B. COBANOGLU	Art Unit 3626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/21/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 03/17/2008 has been entered.

2. Claims 1-17 and newly added claim 47 remain pending in this application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12, 14, 17, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (hereinafter Wong) (U.S. Patent No. 6,260,021 B1), Moshfeghi et al. (hereinafter Moshfeghi) (U.S. Patent No. 6,076,166) and further in view of the article "Integrating PACS Power" by Edmund X. DeJesus (hereinafter DeJesus), published on Healthcare Informatics on November 1998.

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A. Claim 1 has been amended now to recite apparatus for providing information processing, management and communication functions in a healthcare environment, said apparatus comprising:

- i. a database server (Wong; col. 12, line 65 to col. 13, line 5);
- ii. a radiology information system (RIS) database (Wong; col. 7, lines 59-64 and col. 8, lines 15-20);
- iii. a picture archive and communication system (PACS) database (Wong; col. 7, lines 59-64 and col. 8, lines 15-20); and
- iv. a database engine residing on said database server to manage said RIS database and said PACS database (Wong; col. 8, lines 15-28) allowing RIS functions and PACS functions to directly access each other at a database level without use of a broker.

Wong fails to expressly teach the (RIS) and (PACS) databases residing on database server. However, this feature is well known in the art, as evidenced by Moshfeghi. In particular, Moshfeghi discloses a (RIS) and (PACS) databases residing on database server (Moshfeghi; col. 2, lines 50-54, Fig. 1).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by Moshfeghi with the motivation of a user only see the information that he/she is privileged to access (Moshfeghi; col. 5, lines 11-12).

Wong and Moshfeghi fail to expressly teach a brokerless interface between said RIS database and said PACS database and allowing RIS functions and PACS functions to directly access each other at a database level without use of a broker. However, this feature is well known in the art, as evidenced by DeJesus.

In particular, DeJesus discloses a brokerless interface between said RIS database and said PACS database and allowing RIS functions and PACS functions to directly access each other at a database level without use of a broker (DeJesus; paragraphs: 1, 2, 11, 19, 27-28).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by DeJesus with the motivation of to have a better diagnosis, more appropriate treatment, better patient care and more effective use of service (DeJesus; paragraph: 11).

B. As per claim 2, Wong discloses the apparatus of claim 1 further comprising:

- i. a set of RIS application modules (Wong; col. 8, lines 15-28);
- ii. a set of PACS application modules (Wong; col. 8, lines 15-28); and

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- iii. an application server running at least a subset of said set of RIS application modules and said set of PACS application modules (Wong; col. 6, line 65 to col. 7, line 15).

C. As per claim 3, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 6, line 65 to col. 7, line 15); and
- ii. at least one Web connection interfacing said application server to at least one client workstation, said at least one client workstation being external to said apparatus (Wong; col. 8, lines 53-64, Fig. 1).

D. As per claim 4, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28); and
- ii. a TCP/IP protocol-based interface connecting said application server to said database server thus providing access to information from said database server (Wong; col. 8, lines 53-64).

E. As per claim 5, Wong discloses the apparatus of claim 1 further comprising:

- i. at least one image server storing image data (Wong; col. 3, lines 42-46); and
- ii. at least one TCP/IP protocol-based interface connecting said database server to said at least one image server thus providing

access to said image data from said at least one image server

(Wong; col. 8, lines 53-64).

F. As per claim 6, Wong discloses the apparatus of claim 1 further comprising:

- i. a set of RIS application modules that are disabled (Wong; col. 8, lines 15-30);
- ii. a set of PACS application modules that are enabled (Wong; col. 8, lines 15-30); and
- iii. a Health Level Seven (HL7)-based interface providing communication between said set of PACS application modules and a RIS system that is external to said apparatus (Wong; col. 7, lines 59-62).

G. As per claim 7, Wong discloses the apparatus of claim 1 further comprising:

- i. a set of PACS application modules that are disabled (Wong; col. 8, lines 15-30);
- ii. a set of RIS application modules that are enabled (Wong; col. 8, lines 15-30); and
- iii. a standard medical communications interface providing communication between said set of RIS application modules and a PACS system that is external to said apparatus (Wong; col. 8, lines 15-30).

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H. As per claim 8, Wong discloses The apparatus of claim 1 further comprising:

- i. an application server, wherein said application server is an Enterprise JavaBeans (EJB)-based server (Wong; col. 8, line 65 to col.9, line 15, lines 38-41);
- ii. a set of RIS application modules running on said application server (Wong; col. 3, lines 18-30, col. 8, lines 15-28); and
- iii. a set of PACS application modules running on said application server (Wong; col. 3, lines 18-30, col. 8, lines 15-28).

I. As per claim 9, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28); and
- ii. a reporting module running on said application server and being dedicated to the management of diagnostic report functions (Wong; col. 4, lines 16-30).

J. As per claim 10, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28); and
- ii. an administration module running on said application server and providing system administration and configuration functions (Wong; col. 15, lines 42-54).

K. As per claim 11, Wong discloses the apparatus of claim 1 further comprising:

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- i. an application server (Wong; col. 7, lines 15-28); and
- ii. a central logging module running on said application server and providing application logging and audit logging functions (Wong; col. 12, lines 6-19).

L. As per claim 12, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28); and
- ii. a central user login module running on said application server and providing central user account management support (Wong; col. 12, lines 6-19).

M. As per claim 14, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28); and
- ii. a set of default display protocols (DDPs) stored on said database server and applied to a set of medical images for reading said set of medical images in a pre-defined display format (Wong; col. 14, lines 49-52).

N. As per claim 17, Wong discloses the apparatus of claim 1 further comprising a visual user interface providing a unified and consistent look and feel for both RIS and PACS applications (Wong; col. 14, lines 53-58).

O. As per claim 47, Wong discloses a system for providing information processing, management and communication functions in a healthcare environment, said system comprising:

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- i. a database server (Wong; abstract);
- ii. a radiology information system (RIS) database residing on said database server (Wong; col. 4, line 52 to col. 5, line 10);
- iii. a picture archive and communication system (PACS) database residing on said database server (Wong; col. 4, line 52 to col. 5, line 10); and
- iv. a database engine residing on said database server to manage said RIS database and said PACS database (Wong; abstract, col. 4, line 52 to col. 5, line 10) by providing a brokerless interface between said RIS database and said PACS database integrating said RIS database and said PACS database and allowing RIS functions and PACS functions to directly access each other at a database level without use of a broker, wherein said system is configurable to operate in any one of three modes including RIS only, PACS only, and integrated RIS-PACS.

The obviousness of modifying the teaching of Wong to include providing a brokerless interface between said RIS database and said PACS database integrating said RIS database and said PACS database and allowing RIS functions and PACS functions to directly access each other at a database level without use of a broker, wherein said system is configurable to operate in any one of three modes including RIS only, PACS only, and integrated RIS-PACS

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(as taught by DeJesus) is as addressed above in the rejection of claim 1 and incorporated herein.

5. Claims 13, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (hereinafter Wong) (U.S. Patent No. 6,260,021 B1) and Moshfeghi et al. (hereinafter Moshfeghi) (U.S. Patent No. 6,076,166), the article "Integrating PACS Power" by Edmund X. DeJesus (hereinafter DeJesus), published on Healthcare Informatics on November 1998 and further in view of Crane (U.S. Patent No. 5,748,907).

A. As per claim 13, Wong discloses the apparatus of claim 1 further comprising:

i. an application server (Wong; col. 7, lines 15-28);

Wong fails to expressly teach automatic scheduling of procedures for patients. However, this feature is well known in the art, as evidenced by Crane.

In particular, Crane discloses automatic scheduling of procedures for patients (Crane; col. 5, line 60 to col. 6, line 3).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by Crane with the motivation of more efficient manner using fewer people, and operating at lower costs in less time (Crane; abstract).

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B. As per claim 16, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28);

Wong fails to expressly teach tracking a patient based on a set of ordered procedures. However, this feature is well known in the art, as evidenced by Crane.

In particular, Crane discloses tracking a patient based on a set of ordered procedures (Crane; col. 6, line 56 to col. 7, line 3).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by Crane with the motivation of more efficient manner using fewer people, and operating at lower costs in less time (Crane; abstract).

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (hereinafter Wong) (U.S. Patent No. 6,260,021 B1) and Moshfeghi et al. (hereinafter Moshfeghi) (U.S. Patent No. 6,076,166), the article "Integrating PACS Power" by Edmund X. DeJesus (hereinafter DeJesus), published on Healthcare Informatics on November 1998 and further in view of Segal et al. (hereinafter Segal) (U.S. Patent Publication No. 2001/0041991A1).

A. As per claim 15, the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28);

Wong fails to expressly teach storing mammography related information and keeping track of notices. However, this feature is well known in the art, as evidenced by Segal.

In particular, Segal discloses storing mammography related information and keeping track of notices (Segal; par.

Abstract, 0036, 0124 and Fig.1 and 7).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by Segal with the motivation of provide procurement, storage and management of mammogram records for women who undergo mammography. (Segal; par. 0036).

Response to Arguments

7. Applicant's arguments filed 03/17/2008 have been fully considered but they are not persuasive. Applicant's arguments will be addressed below in the order in which they appear.

A. Applicant argues that Moshfeghi does not teach multiple databases are contained in one database; (Examiner consider Applicant means server); Examiner respectfully submits that in col. 2, lines 50-54 and figure 1, Moshfeghi teaches computer based patient records (CPR), which includes RIS and PACS databases.

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B. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In particular, Applicant argues that Crane does not teach PACS nor RIS, And Segal does not teach a system with both a PACS and a RIS. Crane reference has been used to basically because Wong fails to teach automatic scheduling of procedures for the patients and tracking a patient based on a set of ordered procedures, and Crane teaches this limitation in col. 6, line 56 to col. 7, line 3. The motivation to combine Wong with Crane would be more efficient manner using fewer people, an operating at lower costs in less time as explained in the rejection of claim 16. Segal reference has been used, because Wong fails to teach mammography related information and keeping track of notices; Segal teaches this limitation in abstract, and paragraphs 0036, 00124. The motivation to combine these references would be to provide procurement, storage and management of mammogram records for women who undergo mammography as explained in the rejection of claim 15 above.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited but not used prior art teach Computer based records management system method 5813009 A, Method and system for

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accessing healthcare information using an anatomic user interface

20010041992, System, method and article of manufacture for managing a medical services network 20010051881, System and method for capturing and archiving medical multimedia data 20020038226, Spatially coding and displaying information 20020078035, Medical system architecture with computer workstations having a device for work list management 20020087359, Medical system architecture with an integrated ris client on the console computer of a modality 20020085026, Integration of radiology information into an application service provider DICOM image archive and/or web based viewer 20020133373, Method and system for ascertaining an institution for making a medical assessment 20020194030, Method for storing and accessing digital medical images 6574742 B1, Picture archiving and communication system (PACS) with a distributed architecture 20030126279, Method and apparatus for formatting digital images in accordance with user-selected communications standard 6618060 B1, Method of bridging between .Net and Java 7213236 B2, Data management system for patient data 7349859 B1, and Non-Patent Literatures: "Communications-Future needs and present solutions", Jean—Raoul Scherrer, International Journal of Bio-Medical Computing, 1995, issue 39, pages 49-52.; "The case for RIS/PACS integration" J. Mulvaney, Radiol Manage, 2002 May-June, 24(3):24-9.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DILEK B. COBANOGLU whose telephone number is (571)272-8295. The examiner can normally be reached on 8-4:30.

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10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher L. Gilligan can be reached on 571-272-6770. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. B. C./
Examiner, Art Unit 3626
6/5/2008

/Robert Morgan/
Primary Examiner, Art Unit 3626